SECRETS of Home Theater and High Fidelity
The Premier On-Line Audio/Video Journal

Product Review - Anthem AVM-20 Surround Processor - December, 2001

Brian Florian

Anthem AVM-20 Surround Processor/Preamp

Dolby Pro Logic, Dolby Digital, DTS, THX Home Cinema, THX Surround EX

Precision: 24-Bit/ 96kHz A/D, 24-Bit/ 192kHz D/A

3 Zone/4 Path operation

RS-232 Port, 3 Triggers

Size: 6 3/4"H x 19"W x 16 3/4"D

Weight: 30 Pounds

MSRP: $4,499 Cdn/ $3,199 USA

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Introduction

Microwaves are a curious thing. Omnipresent, they buzz around us each day, carrying our cell phone conversations and some of the television we watch (among other things). But take the right wavelength at the right intensity, and the little buggers will heat your food, or even cook it if given the opportunity. Unlike a stove which relies on an exchange of molecular kinetic energy between an element and a pan, and subsequent similar exchange between pan and food, microwaves create the kinetic energy right ***in*** the food. Though microwave ovens are ubiquitous, most would-be chefs are unaware of the fact that microwaves primarily heat the ***moisture*** within food. It's this little tidbit of trivia that makes microwave popcorn a reality.

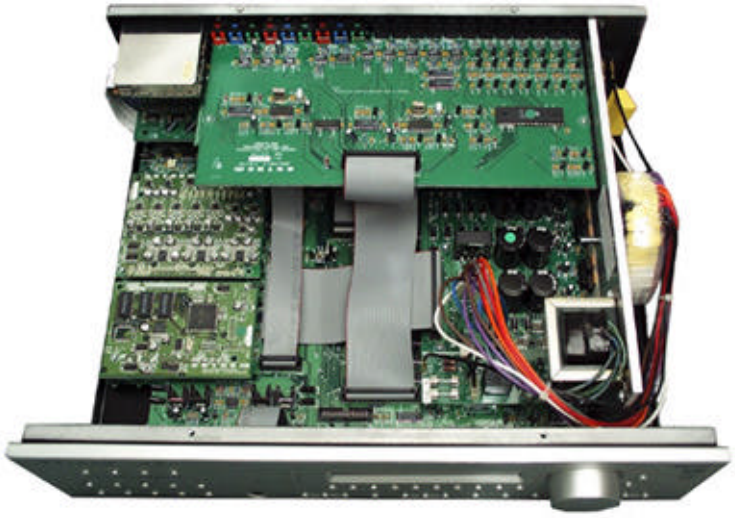
Popcorn kernels, dry as they are to the touch, have moisture trapped inside. When the moisture is heated sufficiently, it turns to steam and expands, forcing its way out of the kernel, and the proverbial "pop" ensues. How convenient that microwaves are so good at heating up moisture. I like kettle popped popcorn as much as the next guy, but you have to admit, those small paper bags of 3 minute magic are pretty darn cool. I concede that not everyone will consider the microwave/moisture/kernel relationship a fascinating revelation, but some (myself included) will dig that sort of stuff. If you want to sell microwave ovens though, the user manual had better talk about cooking times and not food-physics.

The decoding and presentation of surround sound is pretty cool too. And like popcorn, most people don't care what makes it happen, only that it does happen and that it happens nicely, yet there is always the group who get their jollies from the nuts and bolts of the thing. In that regard, Surround Sound Processors are a special challenge for manufacturers**:** they are, by nature, complex and must present a level of control worthy of the central role they play in a home theater. But at the same time they must come across as simple and above all functional while not sacrificing an ounce of performance.

The AVM-20

It follows therefore that interpretations of what a Surround Sound Processor (SSP) should be, what it should include, and what role it should play in a system are as varied as the manufacturers who create them. After having lived with and tested the Anthem AVM-20, I feel it is a pretty special piece because it embodies much of our interpretation of SSP art. Witness the current state of consumer electronics**:** technologies are in constant flux and as a result, the mass market names can't help but yield short term investment products, continually replacing their own models with newer ones as buzz words and marketing gimmicks change. On the flip side are top-shelf names including Lexicon, Krell, Proceed, Theta, and our Stacey Spears own favorite**:** Meridian. All these portray a feeling of ***long term investment*** and those who can afford themselves such a tier of product often do so for that very reason. Take our editor's $18,000 Theta Casablanca II**:** every process (AC-3, DTS, etc) is on a card, cards which can be added and swapped at will. Stacey's Meridian, while featuring card options for input and output, takes a more PC'esque approach by employing lots of generic computing power, and then rewriting or updating software as needed. This is peace of mind at a rather high price. Can state-of-the-art cost less? Can it still have provisions for the future? Yes! The AVM-20 successfully weaves together fixed hardware with software processes, delivering an exquisite statement on the proverbial home theater center piece. Read on.

The Goods



I began my affair with the AVM-20, as I do so many, by unpacking it. The product is well built, solid, and robust. It's heavy to the point you'd easily mistake it for a receiver. This weight is due in part to the beefy chassis whose fit and finish are like a fine exotic automobile's, yet some weight comes from the two, count 'em two, separate transformers. There's the main toroid and then a separate EI core unit for standby power and other 12V needs outside of the audio circuit. The requisite black face is available in addition to the elegant silver of our review sample.

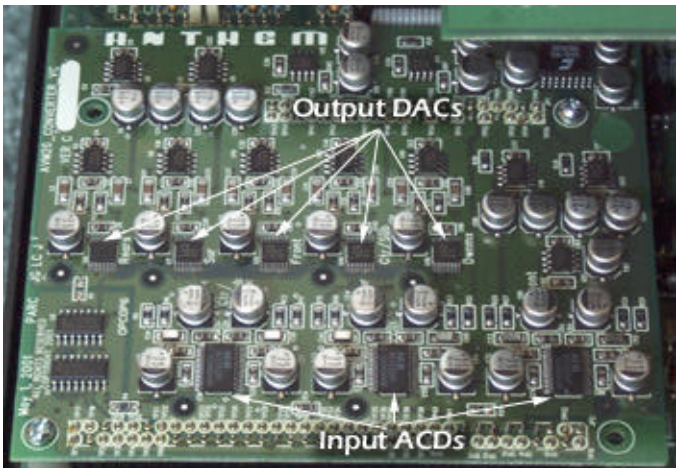
A word on Inputs and Outputs. Well . . . maybe a bunch of words. Just for starters there are 7 basic inputs, each with stereo analogue audio (single ended), coax digital audio, composite video, and S-Video. Three of these have complete sets of analogue audio and video outputs to feed the record lines on those components. There are 3 Toslink (optical) digital inputs and one high-end AES/EBU digital input, any of which can be assigned to any of the 7 basic inputs. Further, there is a dedicated two-channel balanced input and a 6-channel (5.1) single ended input. A pair of component video inputs can be assigned to any audio line. Here's a kicker**:** all inputs can be renamed to ***anything*** you like using letters and numbers to a maximum of 6 characters. For outputs, complete 7.1 sets are provide in both single ended and balanced formats. Both include two jacks for the center and subwoofer (10 outputs per set total). Stereo audio, composite, and S-Video outputs are provided for Zone 2 and Zone 3, while a pair of coax digital audio outputs are available with a variety of formatting options. Despite the abundance of jacks, and the fact that at first glance it looks overwhelming, they are actually easy to sort out: All ***inputs*** are on a black background, while ***outputs*** are all on a white background. See below.

Finished? Oh no! There are three 12V trigger outputs (1/8" jacks), two infrared outputs (also 1/8" jacks), and a 12V terminal strip for IR receivers. A DB-9 RS-232 serial port gets the AVM-20

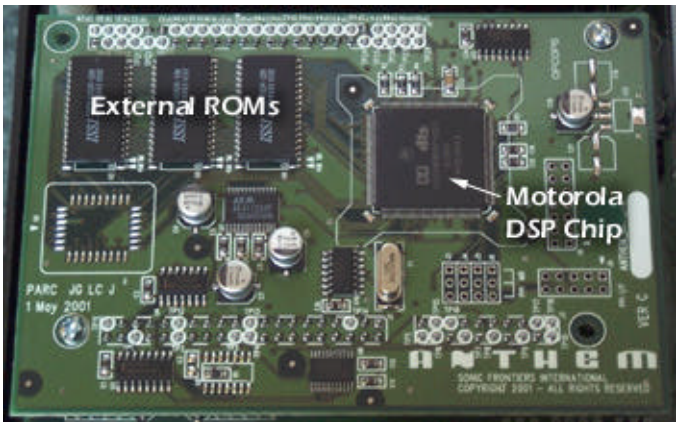
talking to home environment systems, and although it seems banal, antenna terminals are there for the built-in radio. The only spot on the back not populated has been conspicuously labeled ***"IEEE-1394/Phast Connection"*** so even that spot will get used up when a standard is laid down for it.

The AVM-20's design is a little like a personal computer in that it is based on a main board with various daughter cards. A veritable highway of audio, everything gets funneled through the big main board, so Sonic Frontiers (Anthem's mother company) spent a great deal of effort in its design. It is comprised of four layers, with power and ground each getting their own plane. Rather than let a computer draw out the ground plane, Sonic did it manually, a processes which took months of work, but they feel it is well worth it for the audible improvements. The main board manages all the audio ins and outs, while a completely separate board manages the video I/O. Daughter boards which feed the main board include the DSP board and the converter board.

Analogue to digital conversion (A/D or ADC) is done by a set of AK5383 ADCs running at 24bits/96kHz. These are two-channel ADCs, and you can see the set of three on the daughter card (photo below). Three are necessary for digitization of the 6-channel analogue input. The digital to analogue converters (DAC) are AK4382s running at 24bit/192kHz. Again, these are two-channel units, so four of them cover a complete 7.1 output, while a fifth takes care of stereo signals and/or down-converted material being sent to Zones 2 and 3.



AVM-20 Converter Board



AVM-20 DSP Board

On the DSP board is the Motorola 56366, a 24bit process/datapath DSP chip which handles all the Dolby, DTS, and THX processing as well as all other digital audio manipulation. It really is the brains behind the inner workings. Here is where it's interesting to make a distinction about hardware vs. software. The Motorola processor is the hardware, and the particular model of chip used by Sonic includes Dolby Digital and DTS software routines in on-chip ROMS. Other processes such as bass management, time alignment, and all the THX Home Cinema items are stored in external ROM chips (see photo above). This software can be changed and updated using a computer and a download from Sonic's website.

THX and the AVM-20

The primary, numero uno directive of THX's surround sound processor spec is to account for, compensate for, and otherwise address the simple fact that a home theater is fundamentally a different space than that of a commercial, 200 seat cinema. A THX Surround Sound Processor includes several functions, collectively known as THX Post Processing, which are applied to the soundtrack after Pro Logic, Dolby Digital, or DTS decoding when "THX Home Cinema" is

invoked by the user.

The AVM-20 includes all the elements required for the ***THX Ultra Surround Sound Processor*** designation. THX post processing is nothing new, and while we at Secrets are not warm and fuzzy about everything which falls under the THX logo, most of us do highly advocate THX post processing and consider it a requisite element for an upscale surround sound controller. The AVM-20 uniquely allows latitude on some THX elements, so a quick refresher of what THX implies, and how the AVM-20 executes it, is in order.

Timber Matching alters the sound of the surround channels, accounting for the fact that sources behind us sound different from those in front. By making the surrounds sound more like the fronts, a more seamless sound space is created. ***Adaptive Decorelation*** was originally created in the hey-day of Pro Logic. It prevents the mono surround channel from sounding mono by subtly altering the time and phase of the two surround speakers. Because 5.1 soundtracks can contain mono surround information at times, the circuit adaptively kicks in only as appropriate on such material.

Re-Equalization applies a specific roll-off of high frequency information to address the fact that movie soundtracks made for a cinema have an overabundance of treble when played at home (cinemas are equalized to the industry standard X-curve, and high frequency information bleeds off more readily in the large space of a cinema). Re-Equalization is a must for a good movie presentation at home. Without it, we are compelled to turn down the volume in response to the uncomfortable treble, thereby missing the more subtle elements of the soundtrack. But in recent years, soundtracks are beginning to be remixed for home release with appropriate energy balance, requiring Re-Equalization to be disengaged. The AVM-20 is one of few THX processors that allow Re-Eq to be switched off independently of the other THX processes (THX Home Cinema and THX Surround EX). As of software version 1.10, the AVM-20 allows you to make this choice.

Bass-Management is another gem that THX mandated way back when, and some form of it is now found in every Dolby Digital decoding processor. The crossover frequency and slopes for THX's bass management were not picked out of thin air. It is comprised of a 4th order low pass (80 Hz) to the subwoofer and a 2nd order high pass to any main channel set as "small". The mismatch of slopes is in anticipation of THX main speakers which exhibit their own 2nd order roll-off (2nd order + 2nd order = 4th order). The AVM-20 naturally provides the THX crossover but in light of many users not having THX speakers, the crossover point is selectable from 40 to 160 Hz in 10 Hz increments (the slopes remain the same). Best results will be obtained when selecting a crossover point handy to, but not below, the natural roll-off point of your speakers. For those who are concerned with having a different crossover point for each speaker, get over it. Although at first glance it sounds like a good idea, it can actually cause more harm than good and makes getting equal low end extension for each channel a real headache, not to mention how problematic it is to sum the output at so many crossover points so close together.

Time Alignment of the channels is something which is now somewhat common place, but which THX mandated early on. Unfortunately, THX does not mandate how a user goes about setting it, and we've seen some very expensive products with extremely poor means of setting delay (though if you manage to knife through it, they do work). The AVM-20 offers the simplest, most elegant, and comprehensive means of setting delay possible. You just tell the AVM-20 how far each and every speaker, including the subwoofer, is from the main seat in the room. You can chose feet (0.5 foot increments) or meters, and the AVM-20 handles everything else for you. Further, the speaker setup section allows you to distinguish between direct and dipolar speakers so that the AVM-20 can set its delay appropriately . Sound from dipole speakers incurs a natural delay to begin with, and the AVM-20 will account for this (a first for THX processors). In addition, any delay induced by the bass-management crossover is also accounted for transparently to the user.

THX Surround EX is, for lack of a better phrase, the "real deal" when it comes to EX playback and has a few perks over the innumerable clones that are out there. For one, the AVM-20 processing is the genuine Dolby article, as first used in theaters. THX Surround EX responds to the "EX" flag on DVDs while still allowing you to override at any time (early EX titles do not have the flag). THX Surround EX also uses two outputs for the rear channel, promoting the use of two speakers. Even our own early experiments with EX found two speakers to be much preferred, as a single speaker collapses the surround effect and can sound unnatural.

Get in your Zone

Functionally, the AVM-20 is in fact three independent preamps which share a pool of sources. This is the "path" concept. Any source can play along any of four paths. The "Main" path is the multi-channel surround sound processor. "Zone 2" and "Zone 3" paths are each two-channel preamps, each with independent volume. "Record" is the 4th path, without volume, for the purposes of recording. Any source can be playing on any path at any one given time. A source can be playing on more than one path at a time and the audio and video of a source can be broken up on the fly (i.e., you can ***watch*** one source while ***listening*** to another). If a multi-channel source such as a 5.1 movie soundtrack is playing on a path other than Main, the AVM-20 downmixes the material to two-channel. This includes Dolby Digital, DTS, and even the 5.1 analogue input. Naturally, control is a key issue with such a multiple-personality piece. Our own professional control freak, Colin Miller, poured over the RS-232 (serial) command set which would be used by a custom or whole-home installer to talk to the AVM-20. His comments are shown below:

Colin Miller - As a professional control freak, I very much like the command set in the AVM-20. The required length for each command is short, which makes for easy buffering on the output side, in case I want to load a ***whole*** bunch of commands into a single selection sequence without specifying a bunch of separate delays. In addition to the vast amount of control available through the RS-232 port, which allows you to directly access almost any parameter you could think of, a nice feature is that most of the parameters are number-based, in terms of zone or parameter value, which makes string building very easy if you want to pull command values from, or manipulate them with, variables. What I also like is that the command set is relatively straight-forward and intuitive, not requiring any strange calculations to generate the final string. Checksums can be fun to write a subroutine for, but sometimes it can become a bit of a headache, particularly if the protocol isn't explained very well in the first place.

I really like the ability to get feedback from the processor. Most commands can be queried using a "?" as the parameter which opens up possibilities for really cool integration. Not many surround processors I work with allow that kind of feedback.

All in all, from a purely command side, the level of control available on the AVM-20 is a control system programmer's dream .

I, like most of my colleges at Secrets, am not fond of video switchers. Given the option, I will always run video directly from source to display. But with a multi-zone controller as powerful as the AVM-20, it only makes sense to have it. The video switch boasts a published bandwidth of 100 Mhz (-3dB) which should be sweet for DVD's 480p. In pro-video circles, 3 to 5 times the bandwidth is regarded as being required for "safe passage", questioning the AVM-20's ability for 1080p material. However, to put it in perspective, not only was I unable to get good enough test equipment to check it but had I, I would have had no 1080p source to test with! Given that HDTV set top boxes roll off their output anyway, I'm not going to lose sleep over such technicalities.

Form and Function

The display is a nice large illuminated dot matrix with two rows of information. The illumination of the display (and all front panel lights) is functionally inspired. There are three brightness settings, each of which can be set on a scale of 0 (off) to 15 (bright). The display will stay at the selected brightness level until you interact with it, at which time the display can go either to the next brightness setting up, or right up to high (your choice). After inactivity, the length of which you can set in seconds, it goes back down. Videophiles will especially appreciate this ability for the AVM-20 to disappear in a darkened room, without them prompting it to do so.

Each input has the option of getting a global delay. In other words, the entire program is held back as little as 1 millisecond or as much as 84. This is of particular interest to videophiles who are running their picture through a line multiplier which delays the picture. With a global delay on the AVM-20, audio and video can be in perfect sync.

The AVM-20 knows what the time of day is and what day of the week you're on (which is more than I can say for myself at times). Each zone has timers which can be set for weekday, weekend, or a combination of both. As an example, I set it to power-on at 5:15 pm to give the system a little time to warm up before I get home and turn off at midnight in case I forget. On the weekend, the wake up time is 8:00 am. The active source at turn-on is selectable as is the volume level and whether it is instantaneous or ramp-up. Music or a television turning on and off while you're on vacation is an added deterrent to theft.

The AVM-20 provides the option for a center channel EQ, designed to compensate for the effect of putting a speaker above a big flat surface, namely your TV. That's not so new. What's cool is that you don't need a $1500 real time analyzer to dial in a conventional 5 band EQ. Instead, the AVM-20 provides pre-set EQs for various TV size ranges. Pick the range one size up from what your TV actually is and start making your way down until you get the clearest dialogue. Voila! In my setup it truly made for a better match across the front three speakers.

Having a party in your living room/home theater? Try the ***All-Channel Stereo*** mode for music. It's not just a copy of the fronts to the rear, which would cause nasty comb filtering while you enjoy the sushi hors d'oeuvres. No sir, Sonic thought this through. And although I'm not big on such things myself, there are a few acoustic simulations for stereo material such as ***Club***, ***Hall***, ***Stadium***, ***Theater*** and the like. There is even an ***All-Channel Mono*** mode (the entire signal to all channels) and a true mono mode (featuring the lone center speaker).

The ***Cinema Logic*** mode is Sonic's own interpretation of a Matrix surround sound decoder which derives up to 7 outputs (plus subwoofer) from two-channel sources with the algorithm adapting to the particular speaker set-up being used. Personally I found it very pleasant for music material, but the lack of presence in the center channel seemed to break the relationship between visual queues and the associated audio when using in on 2 channel movie soundtracks or stereo television programming. In future software revisions, Cinema Logic will be expanded to include better channel derivation and separate modes for music and movies.

Pick Your Audio Flavor

Any analogue source, including the 5.1 input, can be designated as either ***Analogue DSP***, or ***Analogue Direct***.

Analogue Direct as the name implies, is a purely analogue pass-through of the signal with only volume control applied.

Analogue DSP implies that an analogue signal gets converted to digital for the purpose of bass-management, delay, and any other signal processing such as Pro Logic etc. Note that this is a valid option for the 5.1 analogue input. The more progressive among you will rejoice that you no longer have to worry about the bass management and delay capabilities (or I should say deficiencies) of your DVD-Audio player. The more conservative folk will poo-poo the very thought of digitizing the analogue outputs of DVD-A, but with A/D stages at 24bits/96kHz and D/A stages at 24bit/192kHz, the benefits of proper bass management, time alignment, and the center EQ more than outweigh the consequences of re-digitizing in my view.

In addition to ***Analogue DSP*** and ***Analogue Direct***, any of the 7 basic sources can be assigned as ***Digital*** which implies a digital input to the AVM-20. Digital input can be any flavor of Dolby Digital, DTS or PCM audio up to 24bits/96khz.

Each source has its own individual 2 band EQ (bass and treble), and each has its own input level trim.

Volume is managed by a Crystal CS3310, a digitally controlled analogue device. This in and of itself is not so unique, but the AVM-20 is one of the few SSPs to really harness the convenience of such a volume. For each of the paths, you can set what the volume will be at power-on (no nasty full-volume surprises). You can also set a maximum volume for each path. Being that the AVM-20's settings are password protectable, those with teenagers are already seeing the genius of this type of control. Even the headphone jack has independent power-on and max-volume settings.

A pair of coax digital outputs are provided. These can be a pass-through of digital signals coming into the AVM-20, or if an analogue source is selected on the record path, they can be a digitized copy of the signal. In such case you can select the output to be 16bit/44.1khz (expected by most consumer digital recorders) or 24bit/88.2khz. This last option will likely be supported only by pro gear or select PC sound cards, so why would you want it? Well, chances are the AVM-20 is a better ADC than your PC soundcard, so you could use it to bring in material at 24/88, giving lots of headroom in such programs as Sound Forge and CoolEdit to do EQs, noise reduction, and normalization before burning yourself a standard 16/44 CD.

The Experience

Interacting with the AVM-20 is a remarkably intuitive experience. When first getting acquainted with the AVM-20, particularly when setting it up for the first time, I recommend hooking it up to the television/screen whether you will be putting video through it or not. It won't give you any ***more*** information than the front panel, but it will help you initially by showing you ***all*** the elements in a menu as oppose to one line at a time. After just a couple times through it, I no longer needed the on-screen display.

Everyday operations on the AVM-20 makes sense. Input selection is direct, not a cycle, and pressing any of the input buttons will turn the AVM-20 on with that input selected (if it wasn't already on). Buttons are clearly labeled. Press one and turn the master knob to make a change. Hit "THX" for example and turn the knob to select between on and off. Or press "dynamics" and use the knob to cycle through ***Normal***, ***Reduced***, and ***Late Night***.

The remote is fairly large. Indeed every function of the AVM-20 can be controlled with it, and it has built in codes for virtually any mainstream CD/ DVD player, VCR, TV, Cable box, Satellite dish, and so on. With the abundance of buttons available, I found it covered more of my equipment's functions than any other such "multi-function" unit I've ever seen. This comes at a small price though: The remote can only put on one hat at a time. It is either the ***"AVM-20 remote"*** or the ***"TV remote"*** or the ***"DVD remote"*** etc. as selected by the buttons at the very top. The exception is the volume control which you can set to always correspond to the AVM-20 no matter what other hat the remote has on. The buttons are a little mushy, leaving me uncertain as to whether I've pressed one or not, but it does illuminate whenever you are using it. It's nice because there are so many buttons, and finding the one you want by feel would be next to impossible. You'll still need to memorize which button does what since labels for many functions are not on the button but on the background and thus invisible in a dark room despite the button illumination.

The AVM-20 is very responsive to commands from the front panel. The same requests from the remote deceptively seem slower, but that's because of its mushy buttons. It is very quick to act on changes in the audio bitstream as you navigate through DVD menus and the like, locking on to the bitstream and changing mode as appropriate with ease. Initially there was some irregular "popping" when locking on to a bitstream, but as of software version 1.10, which incorporates recent bug-fix code from Motorola, the AVM-20's behavior is flawless.

The AVM-20, unlike the majority of AC-3 decoders, actually reads the "Surround Encoded" flag in two-channel Dolby Digital bitstreams and sets its playback mode accordingly. So if the flag is ***"Dolby Surround Encoded"***, the AVM-20 goes into Pro Logic mode. Otherwise it will go into Stereo mode (though you can force Pro Logic playback if the occasion dictates).

Any decent SSP will remember the playback mode selected for each input, but the AVM-20 goes beyond that, also remembering your selections for Dynamic Range Control, THX, and so on. For example, DRC can be "Reduced" for the DSS (satellite) input and "Normal" for the DVD.

As per THX requirements, the AVM-20 does internally attenuate DTS material by 4 dB, equalizing it with Dolby Digital material at the default -27 dialnorm value (for more information, see our article on Dialogue Normalization). The AVM-20 however does not provide a DTS music mode which would automatically attenuate the LFE channel by 10 dB (for more information, see our article on the LFE Channel). In reality, it is very easy to make level adjustments to any channel without disturbing the master calibration settings, so for the DTS CDs which require it, it is not hard to do.

And, the Sound . . ..

The AVM-20 sounds good. ***Really*** good! One can easily get over-absorbed with the features and functionality of the AVM-20, but the sheer sound quality is not to be understated. Ever since Dolby Digital started becoming mainstream, I've said that a surround sound processor **is** in fact a DAC. And as such an evaluation of its sonic quality should be along the exact same veins as if one were discussing a CD player or dedicated outboard DAC. Next to your speakers, the processor is the most influential element on a home theater's overall sound. The AVM-20 is clean, comfortable, and free of impurities. Forget the analogue outputs of your CD player. Unless you

paid four figures for it, just feed the AVM-20 a digital signal and let it handle the rest! Vocals are natural, bass is defined, and there is detail without the hash which is all too common in SSPs. Dare I say, Supertramp on CD sounded awfully analogue, reminding me of my reel-to-reel copy from so long ago. Brass, such as trumpets and French horns, is something I had practically given up on prior to the AVM-20, accepting that a reproduction which would please me was a metaphysic impossibility. Then I dug out an old CD "John Williams conducts John Williams, The Star Wars Trilogy" and started calling and e-mailing people "You've got to hear these horns," I preached. "They're real!". I fed the AVM-20 some Chesky 24/96 DVD material and compared the sound when running it as ***Analogue Direct*** and ***Analogue/DSP***. I listened and listened and listened . . . .

Then I finally got something**:** there was a miniscule difference in the treble. Not even enough to describe. I tell you honestly, in a single-blind test I would not be able to say which is which only that you were changing them. In a double-blind setting, I would probably miss the change all together. It's that subtle. I can't even tell you "good" or "bad". Either way the detail, nuance, and subtle inflections were perfectly intact. The point is DVD-A will certainly not be "wasted" on the ***Analogue DSP*** setting, but if it bothers you mentally, rest assured the purely analogue stages will serve your material well. But under the circumstances, I say one would be foolish to give up the benefits of bass management, time alignment, and the center EQ.

DACs aren't the only thing. At the AVM-20s outputs are Op-Amps of renowned pedigree**:** no less than Burr Brown OPA-2134s. I almost hesitate to say "op-amp" because of late there has been some renewed criticism of them as output stages with the alternative being stages made from discrete components. Sonic is not at all ashamed and cite their selection of the Burr Brown units as not just 'good enough', but as a large contributor to the AVM-20's sound. Folks who have been in the biz for awhile will remember an article in ***[name omitted]*** magazine a while ago which trashed op-amps, conveniently leaving out the newest available at the time. While there are still all too many examples of "bad" op-amps, sonically, the best ones, like the Burr Browns, are just about ideal nowadays. A discrete circuit would obviously have a thermal advantage, but how much this matters comes down to how much current the load wants, and "better" op-amps handle the task in question without inducing a loss in sonic character. A discrete circuit with performance equal to the op-amps in the AVM-20 would end up being larger than a pack of cigarettes ***per channel***, with an obviously higher cost not just in parts, but in production, inventory, etc.

The AVM-20's sound is refined and exquisite. In what I heard, nothing could be described as incorrect. Never did I think "if only it was a little more (or less) such-and-such". The sound was Intrinsically satisfying. You forget about the "wow" of audio and just plain enjoy the music or the movie. And isn't that the whole point?

Synopsis and Considerations for the Future

The AVM-20 is a statement piece. A statement about all that is important, useful, and desirable in a surround sound processor. It's also a statement about fair value. I suppose no preamp/ processor can be all things to all people, but the AVM-20 is the only one I know of that at least has a shot at it. It delivers excellent analogue performance and treats such material with reverence. It offers eloquent control and misses no mark in terms of usability. Hard core digital and home theater aficionados will be downright giddy to get one into their personal movie palaces.

I sincerely cannot call to mind being as impressed with the efforts of a manufacturer as I am with Sonic Frontiers and their AVM-20. Three grand isn't chump change, but when you consider what the AVM-20 is and what it does, the word "bargain" or "steal" is not out of place. Get to know one as soon as you can.

Sonic Frontiers has demonstrated a genuine commitment to the product's life span by refining the AVM-20 over the last few months since its introduction via the 1.10 software update. Owners can look forward to 1.20 which will add more features to the AVM-20's repertoire. Like all Motorola DSP-based units, the current crop of chips simply do not have the wherewithal for Pro Logic II processing, but they (Motorola) are working on it. Sonic is thus planning a 2.0 version software to accompany a replacement DSP board which will add Pro Logic II and DTS ES among other things. The cost of new units at that point will go up by the cost of the upgrade, so there is no reason to hold off buying one and enjoying it right away. As of this writing, the target date for the 2.0 upgrade is April 2002, but actual availability rests on Motorola's shoulders.

We will be following Sonic's development of the upgrade and will publish a report on it when available.

- Brian Florian -

Related Hardware used during the reviews:

Paradigm Reference Studio/40 and Studio/CC speakers
Paradigm Mini-Monitor speakers
Velodyne CT-150 powered subwoofer
Smart Theater Systems 2X150VT amplifier
Rotel RB-985 5 channel THX amplifier
Yamaha RX-V795a processor/receiver
Toshiba 2108 DVD player
Yamaha CDC-695 CD player
Nordost Blue Heaven, Moonglow, and S-Optix cable
Sony KV-27S36 Trinitron TV
Smart Theater Systems GC120 AC Line Purifier

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